

ABSTRACTS

ORIGINS OF THE MOLLUSCAN FAUNAS OF THE AFRICAN GREAT LAKES: NEW EVIDENCE. Kat, P.W. National Museum Kenya, Nairobi.

Two lines of evidence, one fossil and the other karyological, are pursued to elucidate the origin and evolution of the endemic molluscan faunas of the African great lakes. An early Miocene fauna from the Gumba beds on Rusinga Island in Lake Victoria shares several taxa with that of the contemporaneous Mohari Formation of the Edward-Albert Rift, indicating the existence of a widespread pre-rift fauna. During the Miocene, there was an apparent radiation of the bivalve genus *Pliodon*, which is first encountered in the Cretaceous, and is now represented by two species with relictual distributions: *P. ovata* in West Africa and *P. spekii* in Lake Tanganyika. Neither Miocene fauna contains representatives of the presently widespread gastropod genus *Bellamya* and the bivalve genus *Caelatura*, which are proposed to have invaded Africa from Central Asia when a land bridge formed about 17 mya.

Karyological evidence indicates that all species of *Bellamya* in Lake Victoria are derived from Nilotic *B. unicolor*; their chromosomal identity indicates a recent radiation. A new species of *Bellamya* from the coastal region of East Africa, previously included in *B. unicolor* on the basis of shell shape similarities, is entirely different in chromosome number and morphology. At least two races of this new species exist. Further south, widespread *B. capillata* and the endemic *B. jeffreysi* from Lake Malawi, while different in chromosome number, hybridize freely. The resulting hybrid swarm of sterile individuals is mainly found in shallow water in the southern region of the lake. *B. capillata* and *B. jeffreysi* exhibit a distant relationship to the coastal region species. *Neothauma tanganyicense* from northern Lake Tanganyika shows an expectedly high chromosomal similarity to *Bellamya* from both Lake Malawi and Lake Victoria. These observations necessitate a complete revision of the African Viviparidae, the present taxonomy of which relies too heavily on shell parameters.

NEW RECORDS FOR SEVEN APLACOPHORUS MOLLUSCS FROM THE EASTERN GULF OF MEXICO, WEST COAST OF FLORIDA. James K. Culter and Nora V. Maddox, Mote Marine Laboratory, Sarasota, Florida.

The distribution, abundance and taxonomic status of the aplacophorus molluscs is poorly known. This group is probably not as rare as would be suggested by accounts in the literature. Due to their small size, they are perhaps often overlooked in ecological studies.

From November of 1979 through July of 1984, aplacophoran specimens were collected from three regions of the west Florida Coast, in waters ranging from 1.5 (nearshore) to 150 meters deep (approximately 150 miles offshore). The majority of specimens were found at depths between 80 to 150 meters. The study areas were bounded by the Dry Tor-

tugas to the south and the Withlacoochee River to the north. Ninety-six stations were sampled over all seasons with aplacophorans present at 25 (26% of total). A total of 2,656 samples resulted in the collection of 473 aplacophoran specimens. Two quantitative sampling devices were used for the collections: a modified Reineck box core (sampling area 0.045m²) and a diver-operated box core (sampling area 0.0156m²). A 0.5mm mesh size was used to separate infauna from sediments.

A total of 7 undescribed species, as distinguished by external characteristics, were differentiated. Six of the species belong to the subclass Solenogastres and the remaining species to the subclass Caudofoveata. Four species (1 caudofoveata, 3 solenogastres) accounted for over 98% of the animals collected. Specimens were recovered from sediments ranging from silt/clay to coarse sand with majority of specimens present in fine (57% of total animals) to medium sand (36% of total animals). These collections represent a new record for the eastern Gulf of Mexico.

POLYPLACOPHORA AND FISSURELLIDAE (MOLLUSCA) IN THE NEWPORT RIVER — BOGUE SOUND REGION OF NORTH CAROLINA. Hugh J. Porter. University of North Carolina at Chapel Hill, Institute of Marine Sciences, Morehead City.

A 1981-1985 survey of chiton and limpet populations in the Bogue Sound — Newport River — Beaufort Inlet, NC channel areas found *Chaetopleura apiculata* (Say, 1834), and *Diodora cayenensis* (Lamarck, 1822) in the eastern and western inlet regions of Bogue Sound, southern mouth of Newport River, and Beaufort Inlet. Distributions seemed limited by salinity, food, and available shell substrata. Fauna within shell substrata of high chiton densities were discussed. Evidence of xanthid predators as a density limiting factor within shell substrata was discussed.

Highest densities of *C. apiculata* were from just west of the Morehead City State Port in Bogue Sound and west of Phillips Island in the mouth of the Newport River — 55/bu and 30/bu respectively of dredged shell. These same areas also had the highest densities of *D. cayenensis* (3.5/bu and 2.2/bu respectively).

Length data from the State Port and Phillips Island *C. apiculata* populations were suggestive that the species has a 2+ year life span in North Carolina waters. Possible reasons for *Chaetopleura* from the Phillips Island bed to be significantly larger in length than those from the State Port bed were examined.

A second chiton species, found at Wreck Point in the bight of Cape Lookout (just SE of Beaufort Inlet) in 1981, was identified as *Ischnochiton striolatus* (Gray, 1828) (W.G. Lyons, Florida Dept. Nat. Resources).

This species was found in all samples from the State Port bed (highest density = 11/bu dredged shell), only twice from the Phillips Island bed, Cape Lookout, and at no other